

REMARKS

INTRODUCTION:

In accordance with the foregoing, claim 11 has been canceled, and claim 1 has been amended. No new matter is being presented, and approval and entry are respectfully requested.

Support for the amendment of claim 1 can be found in the Specification, for example, at page 7, lines 1-10, and page 17, line 25 through page 18, line 3.

Claims 1-10 are pending and under consideration.

REJECTION UNDER 35 U.S.C. §102:

In the Office Action, at page 2, item 2, the Examiner rejected claims 1-7, and 11 under 35 U.S.C. §102(b) as being anticipated by Otto (US 4,770,548 – hereinafter Otto). The reasons for the rejection are set forth in the Office Action and therefore not repeated. Applicants traverse this rejection and respectfully request reconsideration.

The MPEP states: “[t]o anticipate a claim, the reference must teach every element of the claim.” (MPEP 2131).

The MPEP then quotes: “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). (Quoted in MPEP 2131).

The MPEP further quotes “[t]he elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required.” *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). (Quoted in MPEP 2131).

Independent claim 1 recites: “...wherein the innermost sealing lip is a non-contact sealing lip leaving a gap between a free end thereof and the sealing surface of the sealing contact member, said gap being of a size sufficient to permit flow of air therethrough and to form a labyrinth seal structure to prevent a lubricant from exiting the annular working space, and also to provide a non-contact sealing effect when a relative rotation takes place between the outer and inner members.”

Otto discloses a wheel bearing assembly with a seal B. The seal B has an elastomeric sealing element 26 that has a primary lip 34 and a secondary lip 36. There is a clearance c

between a cylindrical face 38 of the primary lip 34 and a cylindrical sealing surface 14 of a cone 8. (See Otto, at FIG. 2, and col. 4, lines 9-39).

In the device disclosed in Otto, by design, lubricant from the sealed annular cavity 22 housing the rollers 16 seeps between the cylindrical face 38 of the primary lip 34 and the sealing surface 14, to lubricate and reduce friction between the secondary lip 36 and the sealing surface 14. (See Otto, col. 5, lines 59-64, and col. 6, lines 11-14 and 40-45).

In contrast, as disclosed in a non-limiting embodiment in the subject application, lubricant is prevented from exiting an annular working space through gaps $\delta 1$ and $\delta 2$, defined between free ends of non-contact sealing lips 10a and 12a and sealing surfaces 2c and 15aa, respectively. (See Specification, at FIGS. 2B and 3B, page 12, line 19 to page 13, line 7, and page 14, line 8 to page 15, line 11).

In response to Applicants' previous arguments, the Examiner asserts that "[w]hen rotating, the Otto's gap does prevent lubricant from even moving past lip 36 (see col. 6, lines 45-61)." Applicants respectfully disagree.

Otto recites: "[t]hus, in contrast to the primary lip 34, some friction develops between the secondary lip 36 and the wear surface 14, but that friction is small due to the small area of contact and the seepage of a small amount of lubricant through the vent apertures 50 and into the region of contact at the contact face 56." (Otto, col. 5, lines 59-64).

"When the bearing B is placed in operation, as for example at the drive wheel for a front wheel drive automobile, the cones 8 will rotate relative to the cup 2 or vice-versa. As a consequence, the tapered rollers 14 tend to pump some of the lubricant toward the thrust ribs 12 of the two cones 8 and over the sealing surfaces 14 of those ribs 12. This lubricant, upon encountering the primary lip 34 of each seal B is for the most part returned toward the tapered rollers 16 and the sealed cavity 22 in which they revolve." (Otto, col. 6, lines 5-14, emphasis added).

"During starts and stops in operation or when the speed of rotation is so slow that the pumping cavities 44 are ineffective in returning lubricant to sealed cavity 22, the area adjacent to secondary lip 36 is partially filled with lubricant which will provide lubrication to lip 36 when the speed of rotation increases." (Otto, col. 6, lines 56-61).

In Otto, by design, lubricant passes through the clearance c between the cylindrical face 38 of the primary lip 34 and the cylindrical sealing surface 14. Thus, at least at slow speeds,

Otto discloses that the primary lip 34 does not “provide a non-contact sealing effect when a relative rotation takes place between the outer and inner members.”

Further, Otto neither discloses nor suggests that clearance c between the cylindrical face 38 of the primary lip 34 and the cylindrical sealing surface 14 forms a labyrinth seal structure.

Thus, Applicants respectfully submit that Otto does not disclose each and every element of the claimed invention, arranged as in the claim.

Accordingly, Applicants respectfully submit that independent claim 1 patentably distinguishes over the cited art, and should be allowable for at least the above-mentioned reasons. Further, Applicants respectfully submit that claims 2-7, which ultimately depend from independent claim 1, should be allowable for at least the same reasons as claim 1, as well as for the additional features recited therein.

REJECTION UNDER 35 U.S.C. §103:

In the Office Action, at page 3, item 4, the Examiner rejected claims 1-8 and 10 under 35 U.S.C. §103(a) as being unpatentable over Applicants' Admitted Prior Art (APA) in view of Otto. The reasons for the rejection are set forth in the Office Action and therefore not repeated. Applicants traverse this rejection and respectfully request reconsideration.

In the Office Action, at page 3, item 5, the Examiner rejected claims 1-9 under 35 U.S.C. §103(a) as being unpatentable over Nagase et al. (US 6,168,315 – hereinafter Nagase) in view of Otto. The reasons for the rejection are set forth in the Office Action and therefore not repeated. Applicants traverse this rejection and respectfully request reconsideration.

As a general matter, to establish a *prima facie* obviousness rejection, the Examiner needs to provide evidence of the existence of individual elements corresponding to the recited limitations, a motivation to combine the individual elements to create the recited invention, and a reasonable expectation of success. (See MPEP, at 2143. – “[t]he teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure.” In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).”, and at 2143.03 – “[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).”).

The Examiner states that the APA does “not disclose that the innermost lip is a non-contact ceiling lip.”

Additionally, the Examiner states: "Nagase does not disclose that an innermost lip (e.g. 41a) is a non-contact ceiling lip."

As noted above in the section regarding the rejection under 35 U.S.C. §102, since, by design, lubricant passes through the clearance c between the cylindrical face 38 of the primary lip 34 and the cylindrical sealing surface 14, the primary lip 34 of Otto does not "provide a non-contact sealing effect when a relative rotation takes place between the outer and inner members." Accordingly, Applicants respectfully submit that even hypothetical combinations of APA and Otto, or Nagase and Otto, do not disclose each and every element of the claimed invention, arranged as in the claims.

Thus, Applicants respectfully submit that, the Examiner has failed to provide evidence that the individual elements exist in the prior art, and thus, the Examiner has not provided sufficient evidence to maintain a prima facie obviousness rejection of the claims.

Accordingly, Applicants respectfully submit that independent claim 1 patentably distinguishes over the cited art, and should be allowable for at least the above-mentioned reasons. Further, Applicants respectfully submit that claims 2-10, which ultimately depend from independent claim 1, should be allowable for at least the same reasons as claim 1, as well as for the additional features recited therein.

CONCLUSION:

In accordance with the foregoing, Applicants respectfully submit that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the cited art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

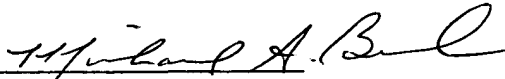
If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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